

<b>Notice of Allowability</b>	Application No.	Applicant(s)
	10/076,803	SCANLAN ET AL.
	Examiner John H Le	Art Unit 2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to Applicant's amendment filed 07/27/2004.
2.  The allowed claim(s) is/are 1 and 11-16.
3.  The drawings filed on 14 February 2002 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some\*    c)  None    of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/27/2004 has been entered.

***Response to Amendment***

2. Applicant's amendment filed 07/27/2004 has been entered and carefully considered.

Claim 1 has been amended.

Claims 2-10 have been canceled.

Claims 11-16 have been added.

***Reasons for Allowance***

3. Claims 1 and 11-16 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

In combination with other limitations of the claims, the cited prior arts fails to teach in respect of each baseline process, determining the magnitudes of a plurality of Fourier components of delivered RF power and storing the magnitudes as reference data for that baseline process, and when a fault is to be classified, repeating more than one of the said baseline processes according to a predetermined decision tree to classify the fault by comparing the current

magnitudes of the said Fourier components with the corresponding reference data, as recited in amended claim(s) 1.

In combination with other limitations of the claims, the cited prior arts fails to teach in respect of each baseline process, determining the magnitudes of a plurality of Fourier components of delivered RF power and storing the magnitudes as reference data for that baseline process, and when a fault is to be classified, repeating more than one of the said baseline processes according to a predetermined decision tree to classify the fault by comparing the current magnitudes of the said Fourier components with the corresponding reference data, as recited in amended claim(s) 1.

In combination with other limitations of the claims, the cited prior arts fails to teach when a fault is to be classified, repeating at least one of the said baseline processes according to a predetermined decision tree to classify the fault by comparing the current magnitudes of the said Fourier components with the corresponding reference data, and wherein steps (a) and (b) are performed prior to scheduled downtime of the chamber and step (c) is performed after the scheduled downtime and prior to the production run, as recited in amended claim(s) 11 and 15.

In combination with other limitations of the claims, the cited prior arts fails to teach running a plurality of baseline processes of different types on the chamber, wherein the baseline processes of different types comprise a first baseline process including the same gases as those used in a production run for which the chamber is used, a second baseline process running an inert gas

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plasma, and a third baseline process running at sufficiently low power that no plasma ignites, and when a fault is to be classified, repeating more than one of the said baseline processes according to a predetermined decision tree to classify the fault by comparing the current magnitudes of the said Fourier components with the corresponding reference data, as recited in amended claim(s) 12 and 16.

In combination with other limitations of the claims, the cited prior arts fails to teach running at least one of the said baseline processes types on the other chamber according to a predetermined decision tree to classify any differences between the chambers by comparing the current magnitudes of the said Fourier components with the corresponding reference data, and wherein steps (a) and (b) are performed prior to scheduled downtime of the chamber and step (c) is performed after the scheduled downtime and prior to the production run, as recited in amended claim(s) 13.

In combination with other limitations of the claims, the cited prior arts fails to teach running a plurality of baseline processes of different types on the chamber, wherein the baseline processes of different types comprise a first baseline process including the same gases as those used in a production run for which the chamber is used, a second baseline process running an inert gas plasma, and a third baseline process running at sufficiently low power that no plasma ignites, and running at least one of the said baseline processes types on the other chamber according to a predetermined decision tree to classify any differences between the chambers by comparing the current magnitudes of the

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said Fourier components with the corresponding reference data, as recited in amended claim(s) 14.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

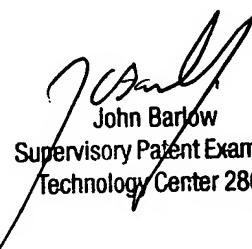
***Contact Information***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H. Le whose telephone number is 571-272-2275. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le  
Patent Examiner-Group 2863  
August 7, 2004



John Barlow  
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